

Junior

FIELD

DATABASE SYSTEM

INTRODUCTION

Junior Find has been designed as a simple but versatile database for use in schools. It is compatible with the database Find. For this reason, every attempt has been made to ensure that, where possible, it follows the same system as Find. It uses the same data files as Find, and therefore Find can be used for any advanced file-handling facilities that Junior Find lacks. It should be noted however, that Junior Find has been designed as a complete package in its own right.

Junior Find is designed to work on a single disc drive only. The program issues screen instructions when discs need to be changed. The database has been designed so that it is possible to change any part of a data file, and make changes to any part of the file structure.

Junior Find has two distinct levels, pupil level and teacher level. There are some utilities which have been designed specifically for teacher use. The main retrieval program, the adding of new records, the editing of records, and the graphs pack are all based at pupil level. Utilities are provided at teacher level to enhance the pack and to simplify some aspects of file handling. Any feature of the program can be accessed from the main menu. Those menus which are designed for the pupils appear in blue on a cyan background, and those for the teacher appear in blue on a white background.

This handbook should not be seen as a handbook for the pupils, and although it has been written in a way which can be read on its own, it will be easier to follow the first time if a computer and the software are to hand.

Junior Find will work on a BBC B, B+ or Master computer, and any Epson-compatible printer.

WHAT IS A DATABASE?

An information handling system is usually referred to as a database system and that is the way it is described in this handbook. A database system is a system for storing and retrieving information in such a way that it can easily be amended or manipulated. Large quantities of information can be handled accurately, and relatively quickly. It is also very easy to clear and refill the computer's store of information.

The Junior Find package contains two discs, the SYSTEM DISC which contains the programs which control the system, and the DATA DISC which provides some sample data. Information, or data, is usually stored separately from the system disc in this way. In any case there is no room left on the system disc for a data file. There can be many data discs, each with its own set or sets of data on it. If you intend to read this handbook and make use of the computer at the same time, you will require these two discs.

As an educational resource, Junior Find should not be seen just as an information provider, but it can be used to enhance a wide range of language and mathematical activities. Therefore an essential element of this package is the facility for children to be able to write and edit their own data files. The graphs pack allows children to explore and experiment with graphical representation of information obtained from a data file.

HOW INFORMATION IS STORED

Think of the database system as an empty filing cabinet capable of holding a large number of files. A file is a collection of records to do with a particular subject or area. A record may consist of a single sheet on which there are a number of standard headings or fields applicable to that file. In this handbook the words file, record and field will be used. 'Field' is used instead of 'heading' because this is the correct term when talking about computer databases.

As an example, imagine a file containing information about a group of people – a year group in a school or members of a Society. A record in such a file would contain the information about one of the students or one of the members of the Society. The fields or headings on each record would almost certainly include such things as name and address, age and so on.

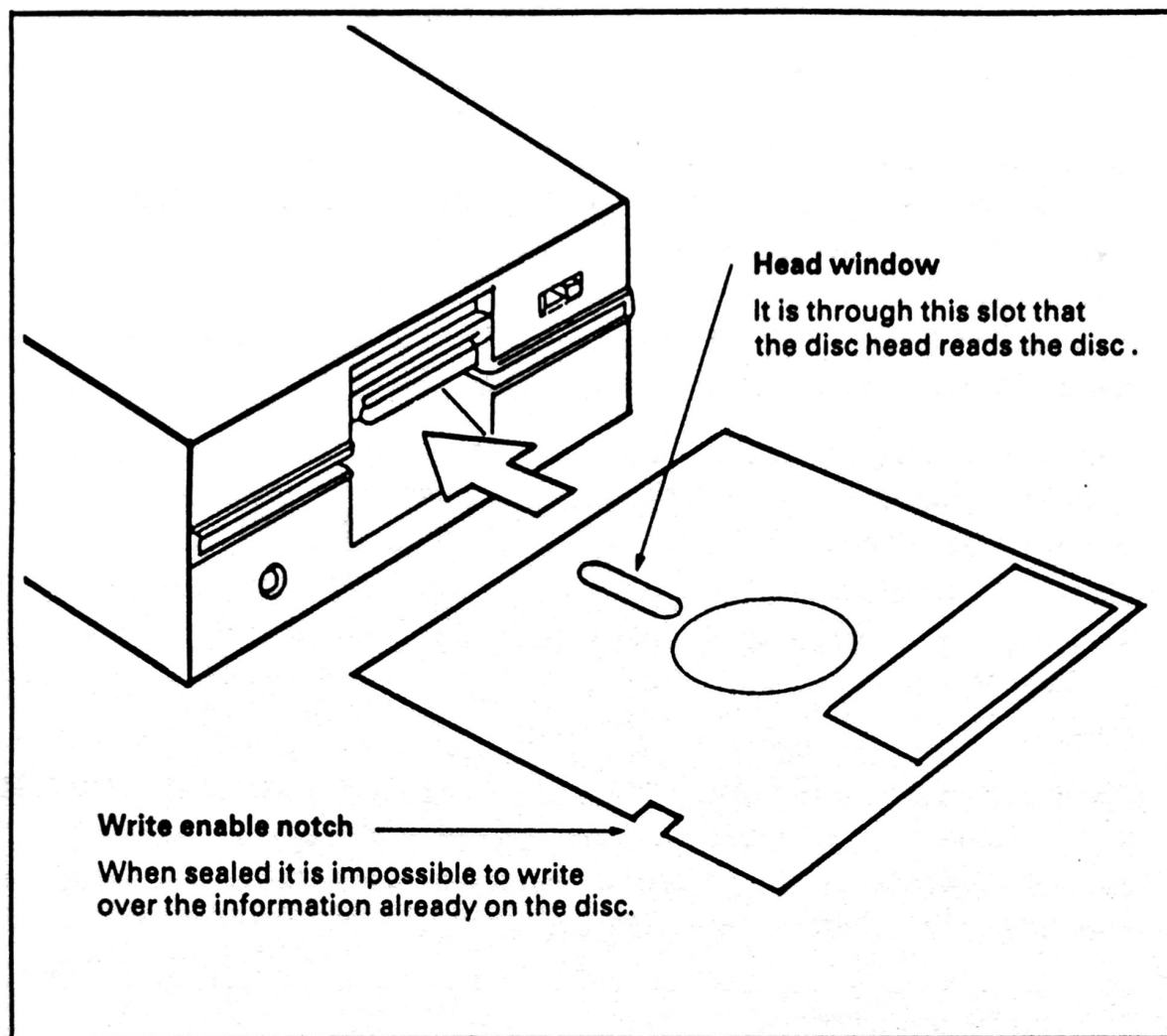
When a new file is being set up it is assumed that it consists of an unknown number of empty records waiting to be completed. Each of these records will have headings or fields ready for the information.

GETTING STARTED

Before using the package, it should be noted that both the system disc and the data disc need to be copied, and these copies used instead of the originals. The original discs should then be stored in a safe place. Two blank formatted discs will be required for this. To make backup copies of the original discs, first put write-protect stickers on these discs and then type:

```
*ENABLE    (RETURN)
*BACKUP 0 0 (RETURN)
```

Then follow the screen instructions. The source disc will be the original disc, and the destination disc will be the blank formatted disc. Junior Find can be used on 80 track drives. See notes on page 46 for this.

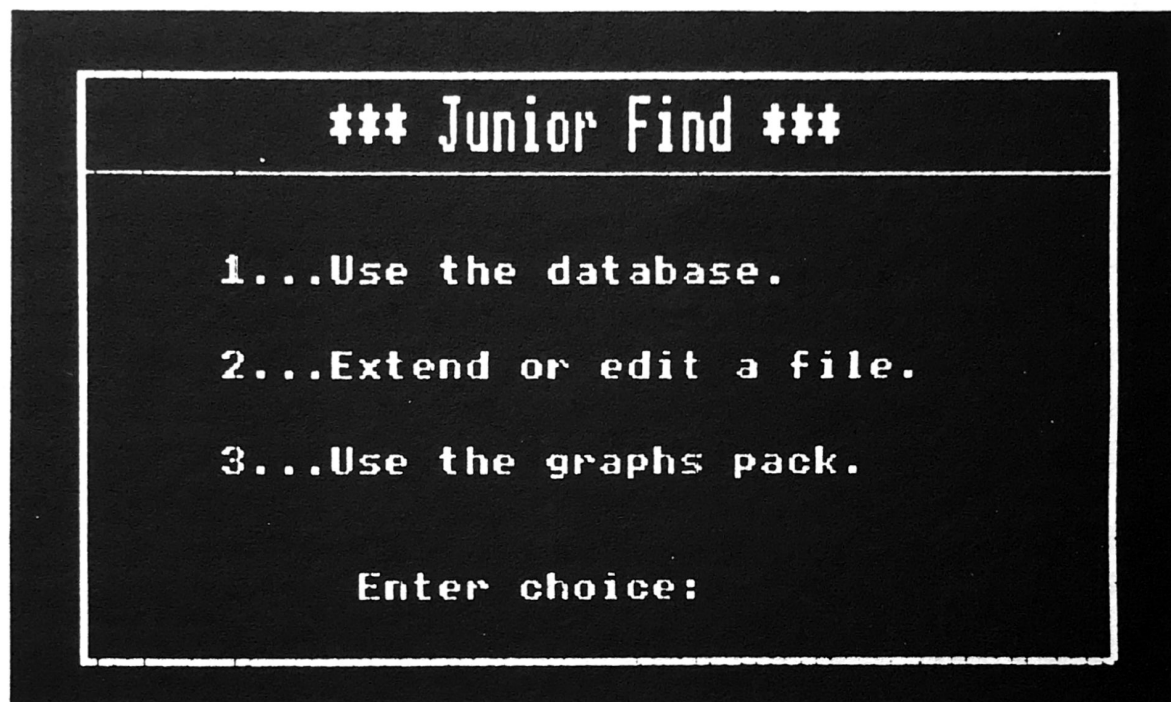
DISC DRIVE DIAGRAM**Loading the program**

Place the disc labelled "Junior Find System Disc" into the disc drive. As indicated in the diagram opposite, the head window should enter the drive first, with the sealed write enable notch on the left hand side. When the disc is completely into the drive, lock it in position by turning down a lever through 90 degrees or by pushing down a horizontal flap - disc drives vary in this respect.

To transfer the first part of the Junior Find program from the disc into the computer, hold down the SHIFT key and then press and release the BREAK key before releasing the SHIFT key. The disc drive should now operate which will cause the title page to fill the screen. A copy of this title page is printed overleaf.

Do not remove the disc from the disc drive yet. The program will always tell you when a disc needs changing.

There are four choices available at the start of the program. Three of these are displayed on the screen for the children to select. The fourth option is a teacher option which can be accessed by holding down the key marked CTRL and pressing T (CTRL-T). This option is described later in the handbook and it is probably best not to select it yet.



USING THE DATABASE

The most obvious starting point is how the database system operates. To use the database, press the number 1 to load the retrieval program. When this has loaded, the system disc can be removed from the disc drive and replaced by the disc containing the data files. You will be asked to press the space bar to continue. The program will display the relevant files on the disc. Files called "BIRDS" and "WEATHER" should be present. The program will ask if this is the correct disc. If you type "N", the program will again tell you to put the data disc in the drive. If you type "Y", the names of the files on that disc will be displayed and you will be asked to choose the file you require. This is done by pressing the space bar until the file you want is highlighted and then pressing RETURN. If there is only one file on the disc it will be loaded automatically having answered 'Y' to the question about it being the correct disc. You will need to load the "BIRDS" file. The display overleaf should then appear on the screen.

MAIN PAGE OF BRITISH BIRDS FILE



Part of this main page will always be the same, part will change when a new file is loaded. The title will of course change with each file as will the fields listed in green down the left of the screen. The BIRDS file has 10 fields.

The database is now ready to be accessed. To find, say, all those birds which lay more than eight eggs, the 'NUMBER OF EGGS' field should be selected. To select a field, press the space bar until the required field is highlighted and then press RETURN. eg. Press the space bar until 'NUMBER OF EGGS' is highlighted, then press RETURN. NUMBER OF EGGS will appear in red in the white box and the words 'less than', 'equals' and 'greater than' will appear on the right. Again use the space bar until 'greater than' is highlighted, and press RETURN. You will now be asked to enter a number and press RETURN. In this example the number 8 should be entered, and RETURN pressed. The computer will immediately begin to search through the records and display those where the bird lays more than 8 eggs. A message at the top of the screen indicates how far the computer has got with its search. Notice that when a record which meets the stated conditions is found, the database prints out all the information contained in that record. Later on instructions are given about the way to limit this printout.

When all the records have been searched a message appears indicating the number matched out of the total number. The system will then give you the opportunity to look at these records again. This is done by pressing the space bar. To continue retrieving data, ESCAPE should be pressed. If ESCAPE is pressed, this message will appear: "Do you want to start again? Y/N." Typing 'Y' will cause the previous "Find" enquiry to be deleted. However if you type 'N', then you have the opportunity to add to the original enquiry. You do not have to keep to the same field, a quite different question can be formulated. You will only be able to use the logical operator "and".

To find those birds that eat worms, a different enquiry needs to be made. Start a new enquiry by returning to the main page of the program. Select the field 'FOOD'. This time a different set of operators will appear: 'includes', 'doesn't include' and 'begins with'. Use the space bar and the RETURN key to select 'includes', and then type in the word 'worms' and press RETURN. It does not matter whether the word

'worms' is in capital letters or lower case letters. The search will then begin, and the records will be displayed for those birds which eat worms. Note that the database will not find entries where the word 'worm' and not 'worms' has been used. Junior Find will not allow more than one word to be entered at one go. This is because such a feature could give misleading results. If 'white and blue' was entered for COLOUR OF EGGS, then only those records where the three words occurred exactly as entered in the question would be displayed. No match would be found if the field contained 'white and pale blue'.

When displaying the retrieved data, the screen will 'page'. This means it will display one screenful of information and then wait for the SHIFT key to be pressed before displaying the next part. Notice that the disc drive is active while the data is being accessed. The program does not store all the data in its memory, it simply looks on the disc and loads in a small part at a time. For this reason the data disc should not be removed from the disc drive.

When the program is waiting for a fieldname to be entered, whether it be the first entry or not, the following options are available: These have not been indicated on the screen as it is left to the teacher to decide which of them they would like the children to be able to use.

TAB

TAB is the childrens' help key. It is not indicated on the screen as it is of no value unless help pages have been created. To do this use the Help Page Creator.

CTRL-F

This is the format output facility which allows the teacher or the pupil to decide which of the fields they wish to be displayed on the screen or sent to the printer.

Format Output is entered by holding down the CONTROL key and pressing F (CTRL-F). The screen now changes to FORMAT OUTPUT. (See opposite.)

FORMAT OUTPUT MAIN PAGE

FORMAT OUTPUT

NAMF	displayed
FAMILY	displayed
DESCRIPTION	displayed
HAUNT	displayed
NEST	displayed
NUMBER OF EGGS	displayed
COLOUR OF EGGS	displayed
FOOD	displayed
LENGTH	displayed
BOOK REFERENCES	displayed
Printer copy	off
exit section	

SPACE to skip...RETURN to choose

It is also used to switch the printer facility on and off. There will be no indication on the normal menu screen to show which fields have been selected. Switching on the printer when no printer is connected will cause the computer to "hang up" - it will suddenly stop part way through displaying a record. When the printer is enabled, the screen display will not be formatted correctly, and no colours are used. The message 'Printer Output' will appear at the top of the screen.

The space bar is used to move the highlighted band to the next field. The RETURN key chooses which field is to be displayed or not displayed. The printer can also be switched on or off. Choosing "exit section" will return you to the main page.

CTRL-A

This facility is made necessary by the way questions are formulated using Junior Find. It will print all the records if no question has been formulated, and will re-display the previous output if a question has been formulated. Thus it is possible to see the results on the screen, format the output and then review the results again, perhaps with the printer enabled this time.

CTRL-Q

This will end the program.

SPACE

This is used to step through the options one at a time. If an option is missed, simply continue stepping through. When the highlight gets to the bottom of the list, it will return to the top to cycle through again.

RETURN

Pressing this key will select an option. It is also used after entering a word or number.

There are two other keys that can be used whilst using the database, the first is the ESCAPE key, and the second is the BREAK key. Pressing ESCAPE while the computer is searching, will cause the system to return to the main page where you will be asked if you want to start again. Typing "Y" will delete the previous enquiry and enable a new start with a new enquiry. Typing "N" will return you to the main page where you will see your previous enquiry still displayed. You can now re-run the enquiry or extend it. Pressing BREAK will return you to the start of the program so that another data file can be loaded in.

*Working on the files**The Teacher Options*

THE TEACHER OPTIONS

Access to the Teacher Options is from the main menu, although this is deliberately not obvious. When the main menu is displayed, instead of pressing one of the numbers 1 to 3, press the CTRL key and T (CTRL-T), in the same way that SHIFT-BREAK is pressed to load the program. There are 8 options one of which is return to main menu. The Teacher Options menu is reproduced overleaf.

THE TEACHER OPTIONS**Teacher Options**

- 1. Change Junior Find level**
- 2. Create a new file**
- 3. Write the HELP file**
- 4. Copy data file**
- 5. Change file structure**
- 6. Define pictogram symbols**
- 7. Convert Factfile files**
- 8. Return to main menu**

Enter choice (1-8)

*Working on the files**Changing level of operation*

1. Changing the level of operation of the retrieval program.

The Junior Find retrieval program has four levels of operation. The system disc supplied is set to level 2, but copies of this can be changed to any of the levels. First make a backup of the system disc as described earlier, but do not attach a write-protect sticker yet. Place the backup copy in the disc drive, load the teacher options program from the main page and then press key 1 to change the level option. First the program will display the level previously selected and then allow this to be changed. Once changed, the program will remain at this level until changed again. Thus four copies of the system disc could be prepared, one of each of the four levels available.

The differences between the four levels in the retrieval program are as follows:

Level 1:- Does not allow an enquiry to be made, it simply displays all the records in the file.

Level 2:- This is the normal level, and operates as described earlier.

Level 3:- This has additional facilities which are useful when children begin to find level 2 rather restricting. With numeric data it includes the operator 'Not equal'. It also enables multiple questions to be formulated before a search is made. For linking questions the operator 'or' is available as well as the operator 'and'.

Level 4: In addition to the extra facilities in level 3, level 4 includes a 'graph records' option in the main data retrieval program. This makes it possible to select and graph information from a subset of the file. The query, as entered, is shown on the graphs pack menu page instead of the "All records" text.

In the 'Extend or Edit a File' program, the option to delete a record is only available in levels 3 and 4 and the key auto-repeat facility is not disabled. In the graphs in level 3 and 4, totals and the mean are displayed in respect of numerical data, also the words 'lowest' and 'highest' are replaced by 'minimum' and 'maximum'.

2. Create a new file

The creation of a file structure has been designed as a teacher option because of the many considerations which need to be taken into account. The file will not contain data to begin with as this will be entered by the children later on using option 2 from the main menu. It is hoped that many, if not all, of the considerations to do with the creation of a file will be discussed with the children first.

To create a file a blank formatted disc is required. Junior Find will not allow a file to be created on a disc with other files or programs on it. This is a precaution which allows all the space on the disc for records. Once the file is complete, it can then be transferred onto another disc containing other files - providing there is room - using the copy option (option 4). The disc can be either 40 or 80 track depending on the type of disc drive being used. An 80 track disc will store twice as much data as a 40 track, but it will not work on a 40 track drive.

Once option 2 has been selected, a new menu will appear. Select the option to create a new file. The program will first check that the disc is blank, and will then ask for a file name. This is the name stored on a disc and must be 7 characters or less. This is the one and only time the file name needs to be typed in.

The next task is to enter the title of the file which can be up to 30 characters long. This is the title that appears at the top of the enquiry page of the retrieval program.

Once this has been done enter the required number of fields. This should be a number between 2 and 10, as Junior Find will not accommodate more than 10 fields. The field names and field lengths should be entered next. A field can be up to 255 characters long. (A space is also a character.) Care needs to be taken when entering field lengths as this affects the speed at which both the retrieval program and the graphs pack work. It also affects the number of records that can be stored. On a 40

track disc the total disc storage space is about 90,000 characters. As the longest record length is 2000 characters, it is possible to store 45 maximum length records. However, if the record length is only 200 characters, 450 records can be stored on a disc. The relationship between the field length and the number of records stored can be explored using the 'Change Fields Length' facility in the Teacher Option 'Change File Structure'.

Once the file has been created, the program will return to the menu. It is now time to define any presets which may be required. Presets are either words, numbers, or phrases defined for a field in advance. Junior Find has space for up to 10 for each field.

When a field with presets is called up for searching, editing or adding, the list of presets is presented, but only one can be selected. For example, in a file about people, their hair colour can be predefined using presets - an agreed range of colours. This makes it easier when searching the file and it also makes graphing more straightforward. Look carefully at the BIRDS file. Would this have benefitted from the use of presets?

With younger children, presets overcome problems with spelling which would otherwise need to be edited. With older children they avoid problems with variations in language. For example, one child might describe a shade as cream while another would call it buff! Without presets this would sometimes make data retrieval difficult.

It should be noted that all the entries made in creating a file can be changed later on if required. If a preset is changed, it probably means that the file will need changing in order to make sure that early records follow the new instructions.

3. Write the HELP file

This facility enables teachers to write their own HELP files to match the needs of their own sets of children. Access is gained by pressing TAB from the enquiry page of the retrieval program or the graphs pack. Teachers will decide for themselves when to tell children about the existence of a help file.

The help file has another use. When exchanging data files with other people it is often necessary to provide some notes about each one. If relevant information about a data file is saved on the help file, it can't get mislaid. When the disc is duplicated, any relevant information is automatically copied with the records.

When 'Write the HELP file' is selected, the computer will show which files are on the disc and ask if this is the correct disc. If "Y" is typed and after selecting the relevant file, the screen will change to a black background with a flashing cursor at the top and the words "Page 1" and "Press SHIFT for more" at the bottom. This is page 1 of your help file and it is now ready for you to type whatever you like into it. A keystrip is provided which, when fixed in place above the red keys, indicates which keys to use to give coloured text, coloured graphics, coloured backgrounds and other special effects.

Coloured Text

If coloured text is required, press SHIFT and one of the red keys f1 to f7 to select the code for the colour chosen. Note that as the red key is pressed, the cursor moves to the right. This is because pressing the red key has placed a code at that particular space on the screen. Anything typed on this line will be in the chosen colour. The same applies to the code for double height characters. If f0 has been pressed at the beginning of a line, everything printed on that line will be in double height until you enter another code (f1 for single height). Note, it is not essential that f0 is pressed at the start of a line.

A colour change can take place in the middle of a line too, but remember that each time a red key is pressed, a space is taken up with a code and nothing else can be typed there. For example if f0 is pressed followed by SHIFT-f1 and then "Hello" is typed, the result will be "Hello" in red, double height characters. However, f0 will have taken up one space on the screen and SHIFT-f1 another. To change colour, press SHIFT-f2 immediately after "Hello" and type "Hello" again. This second "Hello" will still be in double height characters, but it will be in green. The space between the two "Hellos" is filled with the code for green. Since putting in a code leaves a space on the screen, it is well worth while planning each line carefully before keying it in.

Graphics

Many interesting patterns can be produced using the graphics facility. They contribute to making the help page more interesting and eye catching. You are probably familiar with the type of pictures used on Viewdata which appear to be made up of several small squares. These small squares are called pixels and six of them make up one block on the screen. This program uses the keys Q, W, A, S, Z and X to build a block. These keys are in a block of six at the left hand end of the keyboard.

Press CTRL-f0 to "Define" the keys. This causes the computer to print pixels and not the letters when Q,W,A,S,Z,X are pressed. If all six keys are pressed, a complete block is produced. By pressing only some of the six keys, it is possible to produce a wide range of patterns. Pressing a key once will place the pixel on the screen, pressing it again will remove it. Pressing RETURN when the desired pattern is complete, will fix it. To repeat the pattern across the screen, perhaps to produce a border, press COPY. A further variation is achieved by pressing f3 before CTRL-f0. This separates the pixels and 'opens up' the block. A defined graphics character remains accessible through the COPY key until it is redefined.

Coloured graphics

If coloured graphics are required, the colour must be selected before the six pixel keys are defined. Therefore, a pattern of separate magenta graphics would require the following commands: f3 for separate graphics, CTRL-f5 for magenta and CTRL-f0 to define the pixel keys.

It is possible to change the colour in the middle of a line of graphics without leaving an empty space. This is achieved using the the keys f6 for "Hold graphics" and f7 for "Release graphics". To do this, select the colour, define the pixels and copy two less than required. Press f6 to hold the graphics code, but instead of producing a space, another pixel block is printed. Now press CTRL together with the key for the new colour which will cause the computer to print another of the first pixel blocks. Now when COPY is pressed, the pattern will continue, but in the new colour.

Coloured backgrounds

Sometimes it is necessary to highlight a line or a title. This can be done by changing the background colour. By simply pressing f5 for "New Background", a band of white will appear across the screen. The colour of this band can be changed using SHIFT and one of the red keys before pressing f5 for the new background. The coloured band can be started at any point across the screen and can be ended by pressing f4 which will return the remaining part of the line to black.

When the background is set up as required, it is possible to go back and print on it in coloured text or coloured graphics. However, remember that the space immediately to the left of the coloured band contains the colour code for that band. This means that the code for the coloured text or graphics has to be placed in the first space in the band itself. Try this example: Press SHIFT-f2, f5, RETURN. Repeat this three times. This will produce a band of green three lines wide. Move the cursor ten spaces to the right and two lines up, press SHIFT-f1 and write a few words. These can be in upper, or lower case, as preferred.

Double height characters

Double height characters give large, clear, easily read text that is ideal for titles. Experiment with the above example, but this time repeat the band of colour four times instead of three. Now move the cursor along five spaces and up two, press f0

for Double Height and SHIFT-f4, for a change. Now print a few words to see how much more effective the double height characters are. It should be noted that if single height is selected on a line with double height, it is only possible to write at the top of the two double height lines. The cursor will remain on the bottom of the two lines. This is not a fault in the program, but is a limitation of all teletext screens.

Flash

Flash is a further facility which is useful for special effects. It is obtained with SHIFT-f8. If selected along with the colour code, any text or graphics entered will flash on and off on the screen. To place non-flashing text or graphics on the same line as a flashing message, press SHIFT-f9 to counteract the flash message for the remainder of that line.

Forward and backward

While creating help pages, you will notice the message "Press SHIFT for more" at the bottom of the page. This doesn't work at the creation stage and only becomes operable when the help file is in use. The final page in a help file has the message "Press SHIFT to finish".

When one page of a help file has been completed, press the red key f9. This will present the next clean page. The program will only save up to eight pages. When a clean page is presented a check message will appear on the screen. It is important to realise that the program will save pages which are stepped through and left blank. Therefore, only move forward and confirm that a new page is required when you are really sure as extra pages cannot be deleted. Pressing red key f8 will cause the computer to move back one page. If f8 is pressed with page 1 on the screen the computer will cycle back to the last page currently on file.

Saving pages

When the help pages are completed they have to be saved on the disc. This is done by pressing SHIFT-f0, which will also cause the program to return to the menu page.

As well as creating new help files it is possible to edit existing help files. When the data file name is selected at the start of the option, and if a help file already exists for that data file, it will be loaded and displayed automatically. When editing an existing help file, it is not possible to add more pages.

4. Copy data files

This allows the teacher to make a backup copy of the data file or to allow several complete data files to be placed on one disc. (It is always essential to have more than one copy of any data file.)

When going in to edit a file, it is possible to be presented with a message saying that the required data file is not in the right place on the disc. If this happens, use this option to recopy the file. The program will make sure the files are in the right order. The use of the copy facility often involves less disc changing than doing a straight backup of a disc.

5. Change file structure

This option allows changes to be made to any entry made when creating a file, even after data has been entered into the file. This is a comprehensive option that has its own menu. (See below.)

File Structure Editor

- 1. Edit file title**
 - 2. Edit fieldnames**
 - 3. Change number of fields**
 - 4. Alter field lengths**
 - 5. Edit presets**
 - 6. Rename file**
 - 7. Edit another file structure**
 - 8. Return to Teacher Options menu**
- Enter your choice (1-8)**

Most of the options here are self explanatory. Where the structure of the file is changed, as in options 3 and 4, a blank formatted disc will be required on which to save the new version of the file.

Option 5 allows presets to be added, edited or deleted. A preset is deleted if RETURN is pressed without entering any text. More than one preset must be defined for a field; the maximum being 10. Each preset can be up to 15 characters long.

Using option 3 can result in data being lost to the new version, but the original file will remain unaltered. Option 3 will allow fields to be added and also deleted. If both are to be done at once, it is much simpler to rename a field. If there are already 10 fields, then fields will have to be deleted first and a new version of the data created before adding new fields.

Option 4 will not allow a field length smaller than the

length of the largest data file. Option 4 is well worth entering to see how the record length can effect the number of records stored. This is especially evident when the file contains a large number of records, such as the weather file.

Options 3 and 4 will create a new file on a new disc. A routine is built into the program to catalogue a disc found not to be blank, and then to clear it if so wished.

Option 5 should be used with care. Once the presets have been altered the file should be edited to change any entries rendered incorrect by the changes. Errors may occur when using the graphs pack if a preset file is changed part way through its creation and the file has not been edited subsequently.

6. Define pictogram symbols

When a file loads into the graphs pack, the program loads a standard set of pictogram symbols unless a special set has been created beforehand. This option enables such a special set to be created for a file and changes to be made to an existing set of symbols.

When the pictogram definer has been selected, it asks for the data disc to be loaded and if this proves to be the correct one, the name of the data file involved. The screen is then cleared and refilled with a sixteen by eight grid with a movable flashing cursor. The cursor can be moved around the grid by pressing the four grey arrow keys and the rectangles within the grid are filled in or cleared by pressing the space bar.

To the right of the grid, a small box displays the actual size of the symbol being defined. The number underneath the box shows which symbol is being defined. When the program is loaded, pictogram number one is automatically shown in the small box to the right of the definer. If this symbol is not to be changed, then another number needs to be selected. This is done by pressing f0.

When a new symbol is finished or has been edited there are three options: 1. If the symbol is not satisfactory, pressing f4 will clear the picture from the grid, from the box below and from the box to the right of the grid. 2. Pressing f2 will invert the colours which means that everything that is blue will become white and everything that is white will become blue. 3. Pressing f0 will allow another symbol to be defined. The computer will ask which symbol is to be defined. It doesn't matter which number is chosen. If a number is chosen that already has a pictogram symbol defined for it, then that symbol will be displayed in the grid and it can then be edited. When all the required symbols have been defined, or edited, they can be saved on the disc with the appropriate file by pressing f6. The program will then return to the Teacher Options page.

7. Convert Factfile files

This enables any data file created on Factfile (supplied with the Microprimer pack) to be converted so that it can be used with Junior Find. It is not possible to convert

CONVERTING FIND FILES

Junior Find files to Factfile files as Junior Find will allow larger, more complex files than Factfile can handle. Once a Factfile file has been converted, the field length can be increased if desired, and the number of fields can also be increased. Extra information can also be added using the editor. The Factfile file to be converted for use with Junior Find should first be copied on to a blank formatted disc. The Junior Find version will then be created on the same disc.

USING 'FIND' FILES IN JUNIOR FIND.

Files prepared on FIND can be used on JUNIOR FIND provided that there are no more than 10 fields in a record. Files with more fields can have some of them deleted using FIND's disc output facility. JUNIOR FIND will only accept data discs which it 'recognises', so it will be necessary to carry out the following steps:

1. Place the FIND data disc in the disc drive. Ensure that it does not have a write-protect sticker on it.
2. Type the following line and press RETURN.

***TITLE "data1"**

Do not leave a space between the data and 1. The disc will now work on JUNIOR FIND.

CONVERTING THE 40 TRACK SYSTEM DISC TO 80 TRACK

JUNIOR FIND will work equally well on 80 track. However, it will be necessary to 'identify' the system and the data discs after copying to 80 track. To identify the discs, they need to be titled. Place the appropriate disc, without its write-protection sticker, in the disc drive and then enter the appropriate line.

For the System Disc

***TITLE "JFsys1"**

For the Data disc

***TITLE "data 1"**

Combined system/data disc

On 80 track, it is possible to combine the system and data disc onto one disc. This saves having to change discs when using the system. To do this, place the disc in the disc drive and enter the following line:

***TITLE "JFsys1 data1"**

Note: The line listed here must be entered exactly as printed. Upper and lower case letters are read differently by the system.

EXTENDING OR EDITING A FILE

To enter or alter records, select option 2, (Extend or edit a file), from the main menu. Place the data disc in the disc drive and press the space bar. The contents of the disc are then displayed and if correct, the question 'Is this the correct disc?' is answered by typing 'Y'. Provided some data has already been entered into the file, the Database Editor menu will be displayed (see below). It is now possible to add to the file, alter it, return to main menu or end the program.

DATABASE EDITOR

1. Add to the WEATHER file.
2. Alter the WEATHER file.
3. Return to main menu.
4. End the program.

Enter choice (1-4)

Extending a file.

To add records to a file, select option 1 from the Database Editor menu. This will cause the first field in the next blank record in the file to be offered ready for completion. (If the file is a new one with no records, the first field in record number 1 will automatically be presented on the screen without first going through the Database Editor menu.) Enter the data into each field in turn as instructed on the screen. To copy a given field from the previous record use CTRL-C.

If a mistake is made when typing the data into a field, the DELETE key can be used. If the error is spotted after RETURN has been pressed, it is still possible to get back to that field by pressing TAB. If it is necessary to go back more than one field, TAB can be pressed repeatedly until the required field is reached. However, this means that everything that had been entered after that field, has been erased.

A much easier method of editing from the 'adding records section' of the program, other than when it's just the previous field, is to press the red key f6 (Edit). This goes straight into the 'edit section' of the program without going back to the Database Editor menu. That is not all however, having pressed f6 (Edit), the record requiring editing - the one just entered - is presented immediately.

Editing a file.

To edit records in a file, select option 2 from the Database Editor menu. Record 1 will then be presented with options listed along the bottom of the screen:

f0 returns to the menu.

f2 replaces the current record on the screen with the one in front of it (from record 1 it goes to the last record in the file).

f4 replaces the current record with the following one (from the last record it goes to the first).

f6 presents the first field of the current record for editing.

The cursor and COPY keys can be used to speed up the copying of those parts of an entry that do not require changing. Pressing RETURN will skip over a field that requires no changes at all and with levels 3 and 4 of Junior Find, f8 will delete the current record on the screen having checked that this is really what is intended.

CREATING A NEW FILE

As an example, we will create a simple data file to hold statistics about children in a class. To do this, load the Junior Find System Disc and press CTRL-T to select the Teacher Options which were explained earlier on page 23. When the Teacher Options menu appears, select option 2, 'Create a new file'. This will display the Database Creator menu which offers three options (see below).

Database Creator

- 1. Create a new file**
- 2. Create presets**
- 3. Return to main menu**

Enter your choice (1-3)

Select option 1 from the Database Creator menu which will give rise to a request that an empty data disc be placed in the disc drive and SPACE pressed. (Junior Find will not allow a file to be created on a disc which already contains programs or files.) The name of the new file is the first thing to be typed in. This has to be not more than seven characters long, but that is really no drawback because this name is only the one used by the computer. In this example we shall name the file MYSELF.

The second entry is the title of the file. This is what most people will use when talking about the file and it can describe it more accurately than the name. Our title will be 'All About Ourselves'. After this has been entered, press RETURN.

The next stage is to set up the structure for the file. 'How many fields in each record?' is the first question. Type the number 5 and press RETURN. Now the names of the fields need to be entered: NAME, BIRTHDAY, HEIGHT, HAIRCOLOUR and EYE COLOUR. It is important that 'NAME'

should be the first field, as during editing it is this field that remains at the top of the screen while the others are entered and operated on. When all the field names have been entered you will be asked if this is OK. The response 'N' for no, will present field 1 again in order that the necessary changes can be made. If the response is 'Y' for yes, it will be possible to enter the maximum character length for each field. These lengths will depend upon the expected content of each field and allowance needs to be made for the longest possible entry. In this example, enter 30 for NAME, 8 for BIRTHDAY, 5 for HEIGHT, 10 for HAIR COLOUR and 10 for EYE COLOUR. When this is completed the program will automatically return to the Database Creator menu.

From the Database Creator menu select option 2 in order to enter 'preset' lists of words. Preset words can be used for HAIR COLOUR (eg. black, fair, blond, red, light brown, dark brown) and EYE COLOUR (eg. hazel, blue, green, grey, brown). Up to 10 words or phrases can be entered in each field list. For this example no help page will be created, so it is now possible to add the first records.

Return to the Main Menu via the Database Creator menu, and the Teacher Options menu. Select option 2 which will lead straight into the 'adding records' mode. After about ten records have been entered, leave the section and view the datafile. Finally, try the datafile with the Graphs Pack to make sure that there are no problems with the data.

GETTING THE BEST OUT OF JUNIOR FIND

Junior Find is a comprehensive information retrieval package for use in the classroom. To use it effectively requires planning and preparation. What the package is going to be used for should be the first consideration.

1. Junior Find was not designed as an administrative tool. In many cases, traditional methods are as good, if not better, and do not tie up an expensive piece of equipment.
2. Why use a database and what are the likely benefits for children?
3. What work can be done away from the computer to help achieve these benefits?
4. How can children be involved in some or all of the decisions affecting the design and structure of the data files?

Before starting a data file with children, the structure of the file should be designed to achieve identifiable aims. As in all good teaching, try out a sample of the data file before using it with a class, but do this with children where possible so that they can help to identify any problems. In this way many difficulties can be overcome before becoming involved with the work of setting up a long data file.

Start a test file by entering about ten records. Try to include a cross-section of the kind of data that the file will eventually contain and then attempt the following:

1. Set up the kind of searches that children might be expected to do. This is where their involvement in the test can be so helpful. Can the required information be retrieved easily?
2. If the Graphs Pack is to be used, check that appropriate graphs can be drawn, and that they do show the expected relationships. (Allow for the fact that the test file is very limited.)

3. A computerised database stores information in a different way to that used by the more traditional information storage systems. Therefore, it requires different skills to retrieve that information. It is possible to search a computer system in ways which are quite impossible with non-computer systems.

4. Is this the best and most appropriate way for the data to be stored? How much time will it take for the children to enter in the data?

5. Let the children try the test file and see for themselves the problems that occur. What suggestions do they have to overcome any problems?

6. Is there sufficient room for all the data expected in each of the records or has too much space been allowed? Use the 'Change field length' facility to look at this.

GLOSSARY OF TECHNICAL TERMS

Access

The method by which a file is searched.

Alphanumeric

An element containing letters, numbers or special characters or any combination of these.

Blank Disc

This means a blank formatted disc.

Database System

A system for the storage, retrieval and manipulation of structured information.

Data Disc

This is a disc with one or more data files stored on it.

File

A structured collection of records, sometimes called a database.

Field

A specific piece of information in a record.

Fieldname

The 15 character (or less) heading for a field.

Filename

This is the 7 character (or less) name used to store the file on the disc.

Filetitle

A title of up to 30 characters which is displayed at the top of the menu pages in the retrieval program and the graphs pack. It is also printed at the top of any graph.

Head window

The slot through which the disc head reads the disc.

Logical Operator

An element used to combine two or more searches, allowing more than one attribute to be searched at one time.

Main Menu

The most important starting display in a program.

Numeric

An element containing numbers only, or which can be treated as such.

Organisation

The prescribed sequence in which information has been stored.

Presets

A group of pre-defined words or phrases to be used in a particular field.

Record

The information, listed in fields, about one entry in a file.

Search

Looking through a file, using a "matching" process.

System Disc

This is the disc which contains the JUNIOR FIND package of programs. The computer has not enough memory to store all the program at once, thus it might ask for the system disc to be placed in the drive to load another part of the package.

Write-protect sticker

The sticker put over the notch at the side of the disc, used to prevent data being changed on the disc.

